

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1. (currently amended) A power amplifier comprising:

a transconductance stage that is operable to receive an input voltage signal at a gate terminal of a first Metal Oxide Silicon (MOS) transistor and to produce an output current signal at a drain terminal of the first MOS transistor, the transconductance stage further including a first inductor having one terminal coupled to a transconductance stage voltage supply and another terminal coupled to the drain terminal of the first MOS transistor, the first-Metal-Oxide-Silicon (MOS)- MOS transistor having a first gate oxide thickness and a first channel length;

a cascode stage communicatively coupled to the transconductance stage that is operable to receive the output current signal and to produce an output voltage signal based thereupon in response at a drain terminal of a second MOS transistor, the cascode stage further including a second inductor having one terminal coupled to a cascade stage voltage supply and another terminal coupled to the drain terminal of the second MOS transistor, and a third inductor having one terminal coupled to a source terminal of the a second MOS transistor and another terminal coupled to a cascade stage supply return, the second MOS transistor having a second gate oxide thickness and a second channel length, in which at least one of the second gate oxide thickness and the second channel length is substantially larger than the first gate oxide thickness or the first channel length; and

~~wherein the second gate oxide thickness is substantially thicker than the first gate oxide thickness.~~

2. (original) The power amplifier of claim 1, wherein the second gate oxide thickness is approximately twice as thick as the first gate oxide thickness.

3. (original) The power amplifier of claim 2, wherein:
the second gate oxide thickness is approximately 100 Angstroms; and
the first gate oxide thickness is approximately 50 Angstroms.

4. (original) The power amplifier of claim 1, wherein the second channel length is substantially longer than the first channel length.

5. (original) The power amplifier of claim 4, wherein the second channel length is approximately twice as long as the first channel length.

6. (original) The power amplifier of claim 5, wherein:
the second channel length is approximately 0.35 microns; and
the first channel length is approximately 0.18 microns.

7. (canceled)

8. (currently amended) The power amplifier of claim 1,
~~wherein the transconductance stage further includes an inductor having a first terminal coupled to a transconductance stage voltage supply and a second terminal tied to a drain of the first MOS transistor, wherein a source of the first MOS transistor couples to ground, and wherein a gate of the first MOS transistor receives the input voltage signal;~~
~~wherein the cascode stage includes:~~
~~a first inductor having a first terminal coupled to a cascode stage voltage supply and a second terminal coupled to a drain of the second MOS transistor;~~
~~a second inductor having a first terminal coupled to a source of the second MOS transistor and a second terminal coupled to ground; and~~
further comprising an AC coupling stage that couples the drain of the first MOS transistor that produces the output current signal to a gate of the second MOS transistor
transconductance stage to the cascode stage.

9-35. (canceled)